

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method for reducing NOx emissions in diesel engine exhaust installed in a vehicle, comprising:

determining at least one engine operating parameter for each of a plurality of engine operating conditions generated during normal operation of said vehicle;

temporarily installing a NOx detector for detecting respective NOx emissions at each of said engine operating conditions;

developing an injection strategy based on said at least one engine operating parameter at said respective operating condition of said vehicle and said respective detected NOx emissions;

removing said NOx detector responsive to said development of said injection strategy;

controlling the injection of a reagent into the exhaust at a variable flow rate in order to reduce NOx emissions at said various operating conditions in accordance with said injection strategy;

wherein:

said variable flow rate of said reagent is controlled by a reagent injection controller in accordance with said injection strategy based on input of one or more of said engine operating parameters.

2. (Original) A method in accordance with claim 1, wherein said at least one engine operating parameter comprises at least one of fuel injection timing, exhaust temperature, RPM, load, engine speed, exhaust mass flow, cam position, crank angle position, or fuel injection signal.

3. (Original) A method in accordance with claim 1, wherein said reagent comprises one of an aqueous urea reagent, aqueous ammonia, anhydrous ammonia, or a hydrocarbon based reagent.
4. (Original) A method in accordance with claim 1, wherein said injection strategy is developed automatically by one or more algorithms in the reagent injection controller.
5. (Original) A method in accordance with claim 1, wherein said injection strategy is developed by post-processing the detected NOx emissions and the at least one engine operating parameter.
6. (Original) A method in accordance with claim 5, wherein said injection strategy is downloaded to the reagent injection controller.
7. (Original) A method in accordance with claim 1, wherein said injection strategy is provided in the form of multiple injection maps.
8. (Original) A method in accordance with claim 7, wherein said multiple injection maps are provided in lookup tables at said reagent injection controller.
- 9-10. (Cancelled).
11. (Currently amended) A method in accordance with claim ~~10~~ 1, further comprising:
specifying particular drive cycles for said normal operation of said vehicle to generate said plurality of engine operating conditions.
12. (Currently amended) A method in accordance with claim ~~10~~ 1, further comprising:
identifying operating voids in said plurality of engine operating conditions;
specifying particular drive cycles to obtain engine operating conditions corresponding to said voids.

13. (Original) A method in accordance with claim 1, further comprising:
providing at least one SCR catalyst bed in an exhaust system having selective catalytic reduction properties to enable conversion of said Nox emissions into water, nitrogen and carbon dioxide after interaction with said reagent.
14. (Original) A method in accordance with claim 13, wherein said SCR catalyst bed comprises at least one of titanium oxide, vanadium, molybdenum, tungsten oxide, or zeolite.
15. (Currently amended) A method in accordance with claim 1, wherein:
said NOx is temporarily detected by a the temporary NOx detector; ~~and~~
~~said temporary NOx detector is removed after the injection strategy is developed.~~
16. (Currently amended) A method in accordance with claim 1, wherein said temporary NOx detector comprises ~~NOx is detected by~~ a NOx meter temporarily located external to the exhaust system.
17. (Currently amended) A method in accordance with claim 1, wherein said temporary NOx detector comprises ~~NOx is detected by~~ a NOx sensor temporarily installed within the exhaust system.
- 18-34. (Cancelled).